60. (New) The stent of claim 30, wherein a plurality of struts are omitted, with the omitted struts forming a spiral pattern.--

REMARKS

Claims 1, 14, 15, 28, 29 and 32 have been canceled without prejudice. Claims 2, 7, 9, 12, 13, 16, 21, 22, 24, 27 and 30 have been amended. New claims 33-60 have been added. Claims 2-13, 16-27, 30, 31 and 33-60 are currently pending in the present application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

Applicant wishes to thank Examiner Reip and Primary Examiners Thaler and Tucker for their courtesy in extending Applicant's attorney and three of the inventors a personal interview on February 10, 1998. During that interview, the Section 112 rejection, the teachings of the cited references, and proposed claim subject matter were discussed.

1. Rejections Under 35 U.S.C §112

Claims 1-21 stand rejected under 35 U.S.C §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, the Examiner has asserted that, with respect to claims 1 and 12, unless the ends of the stent are somehow constrained, the stent will not maintain a consistent length between the compressed and expanded states. The Examiner then goes on to state his belief that a stent made of a shape memory alloy (i.e., Nitinol) could function as claimed. However, the Examiner asserted that the specification did not disclose the manufacturing steps for a stent made of such a shape memory alloy. This rejection is respectfully traversed.

First, new independent claim 33 has been added to replace original independent claim 1. New claim 33 now specifically

recites that the stent is made of Nitinol. In addition, during the personal interview, it was agreed that pages 16 and 17 of the specification disclose a manufacturing process for a Nitinol stent. Thus, it is respectfully submitted that the specification and drawings provide sufficient disclosure to enable one skilled in the art to practice the present invention, and that the rejection should be withdrawn.

In addition, Applicant has amended claim 9 to overcome the rejection under 35 U.S.C §112, second paragraph.

2. Substantive Rejections Under 35 U.S.C §§102(b) and 103(a)

To summarize the Office Action, original claims 1-27, 29 and 32 stand rejected under 35 U.S.C §102(b) or 35 U.S.C §103(a) in view of U.S. Patent No. 5,449,373 to Pinchasik et al. ("Pinchasik") alone, or in combination with another reference. In particular, claims 1-13, 16-19, 22-27, 29 and 32 stand rejected under 35 U.S.C §102(b) as being anticipated by Pinchasik. Claims 14 and 15 stand rejected under 35 U.S.C §103(a) as being unpatentable over Pinchasik. Claim 21 stands rejected under 35 U.S.C §103(a) as being unpatentable over Pinchasik in view of U.S. Patent No. 5,545,211 to An et al. ("An"). These rejections are respectfully traversed.

In addition, claim 20 has been indicated to be allowable if rewritten to overcome the rejection under 35 U.S.C §112 and to include all the limitations of the base claim and any intervening claims. Claims 28, 30 and 31 have also been indicated to be allowable if rewritten to include all the limitations of the base claim and any intervening claims.

In response to the above rejections and the subject matter discussed at the interview, claims 1, 14, 15, 28, 29 and 32 have been canceled without prejudice, claims 2, 7, 9, 12, 13, 16, 21, 22, 24, 27 and 30 have been amended, and new claims 33-60 have been added. Applicants shall address each set of claims separately:

a. Claims 35 and 36-51

New independent claim 35 has been written to include the limitations of claim 2, claim 19 and allowable claim 20. Many of the limitations from original claim 1 are also included in new claim 35. Claims 36-51 depend from claim 34. Thus, claims 35-51 are submitted to be in condition for allowance.

b. Claims 27 and 59

Independent claim 27 has been rewritten to include the limitations of allowable claim 28. Claim 59 depends from claim 27. Thus, claims 27 and 59 are submitted to be in condition for allowance.

c. Claims 30, 31 and 60

Claim 30 has been rewritten in independent form to include the limitations of independent claim 27, claim 29 and allowable claim 30. Claims 31 and 60 depend from claim 30. Thus, claims 30, 31 and 60 are submitted to be in condition for allowance.

d. Claims 22-26 and 52-58

Independent claim 22 has been amended to recite, for example, that the stent has a plurality of apertures defined by the annular elements and the connecting members, with each aperture having a size and a geometric configuration. In addition, the claimed stent includes, for example, first and second segments that have substantially the same diameter in the compressed state, with the apertures of the first and second segments having different sizes but substantially the same geometric configuration when the first and second segments are in the expanded state. This is illustrated in FIGS. 10 and 11A-11C, and described on lines 6-19 of page 13 of the specification.

In contrast, it is respectfully submitted that none of the cited references, either solely or in combination, teach or suggest a stent having the combined features recited in claim 22. Thus, claim 22, and claims 23-26 and 52-58 depending therefrom, are submitted to be in condition for allowance.

e. Claims 33, 34, 2-13 and 16-21

New independent claim 33 recites, for example, that the annular elements and connecting member are made of Nitinol, with each connecting member preset with an elasticity which causes the connecting member to elongate longitudinally when the annular elements are in their expanded state to compensate for the smaller longitudinal dimension of the annular elements in the expanded state. Support for these recitations is provided on page 10, lines 23-30.

In contrast, none of the cited references teach or suggest connecting members that are made of Nitinol, and which are preset with an elasticity to compensate for the foreshortening experienced by the annular elements of a stent. For example, the connectors 124 in Pinchasik's stent cannot be Nitinol, and cannot be preset with an elasticity, because the Pinchasik stent is made from "low memory, more plastic than elastic" materials (see column 2, lines 42-46 of Pinchasik).

Thus, claim 33, and claims 34, 2-13 and 16-21 depending therefrom, are submitted to be in condition for allowance.

* * *

In view of the foregoing, it is respectfully submitted that all claims of the present invention are now in condition for allowance. Reexamination and reconsideration of claims 2-13, 16-27, 30, 31 and 33-60 are requested and allowance at an early date solicited. The Examiner is invited to telephone the undersigned if there are informalities that can be addressed and resolved in a phone conversation.

Respectfully submitted,

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Dated: April 16, 1998